

EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE CONSTRUCTION OF A ROUNDABOUT, MINOR REALIGNMENT OF THE APPROACHES, INCLUDING NEW LANDSCAPING, STREET LIGHTING, AND DRAINAGE, IN THE TOWN OF HYDE PARK, AT THE INTERSECTION OF VT ROUTE 15, VT ROUTE 100 AND TOWN HIGHWAY #5.

NOTE: AREA OF DISTURBANCE SHALL INCLUDE LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, INCLUDING ANY WASTE, STAGING AND BORROW AREAS WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS.

TOTAL AREA OF DISTURBANCE IS APPROXIMATELY 4.21 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA IS SLOPED AND IS PARTIALLY WOODED WITH SOME OPEN AREAS. VT ROUTE 15, VT ROUTE 100, CHURCH STREET (TH 5), AND A FEW GRAVEL DRIVEWAYS ARE WITHIN THE PROJECT SITE. THERE IS A RESIDENCE ON THE NORTHEAST QUADRANT OF THE ROUNDABOUT, AND A FEW HOUSES TO THE NORTH ALONG VT ROUTE 100. THERE ARE OVERHEAD UTILITIES WHICH WILL BE RELOCATED PRIOR TO CONSTRUCTION. THE PROPERTY SURROUNDING THE PROJECT SITE CONSISTS OF WELL ESTABLISHED FOREST AND MEADOWS WITH MODERATE TO STEEP SLOPES AT THE PROJECT SITE. THERE ARE A FEW HOUSES UP SLOPE WITH GRASS AND TREE BUFFERS. THERE IS ONE HOUSE DOWN SLOPE WITH GRASS AND TREE BUFFERS. DUE TO THE NATURE OF THE SURROUNDING TERRAIN THE PROJECT SITE MAY RECEIVE MINIMAL RUNOFF FROM SURROUNDING SLOPES.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THERE ARE NO WATERWAYS OR WATER COURSES WITHIN THE PROJECT LIMITS. THE UNNAMED TRIBUTARY OF THE LAMOILLE RIVER IS APPROXIMATELY 1000 FEET WEST OF THE PROJECT. THERE ARE SEVERAL DROP INLETS ON SITE DRAINING FROM THE ROADWAY DOWN SLOPE, TO AN ADJACENT WETLAND. THERE ARE 5 SMALL CLASS III WETLANDS WITHIN OR ADJACENT TO THE PROJECT LIMITS. SEE SECTION 1.2.5 FOR IMPACTS TO THESE WETLANDS.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD TREES, SOFTWOOD TREES AND UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED MAINLY TO THE UNDERGROWTH. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF LAMOILLE, VERMONT. SOILS ON THE PROJECT SITE ARE BOOTHBAY SILT LOAM, 8% TO 15% SLOPES, “K FACTOR” = 0.32; ADAMS LOAMY FINE SAND, 2% TO 8% SLOPES, “K-FACTOR” = 0.17; ADAMS LOAMY FINE SAND, 8% TO 15% SLOPES, “K-FACTOR” = 0.17; AND ADAMS LOAMY FINE SAND, 15% TO 25% SLOPES, “K-FACTOR” = 0.17. THE SOIL IS CONSIDERED MODERATELY ERODIBLE DUE TO THE APPLICABLE SLOPES. NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING: 0.0-0.23 = LOW EROSION POTENTIAL; 0.24-0.36 = MODERATE EROSION POTENTIAL; 0.37 AND HIGHER = HIGH EROSION POTENTIAL.

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: NO.
PRIME AGRICULTURAL LAND: YES, SEE BELOW FOR IMPACTS.
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: NO
WETLANDS: YES, SEE BELOW FOR IMPACTS.

PRIME AGRICULTURAL LAND IMPACTS: 4,537 SF TEMPORARILY; 260 SF PERMANENTLY.
WETLAND IMPACTS: 1,187 SF TEMPORARILY; 2,837 SF PERMANENTLY.

THESE IMPACTED AREAS WERE EVALUATED BY ENGINEERING SERVICES FOR THE PURPOSES OF OBTAINING THE ALL-CLEAR AND AS SUCH WERE CONSIDERED TO BE INSIGNIFICANT.

1.3 RISK EVALUATION

THIS PROJECT FALLS UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES FOR LOW RISK PROJECTS. ANY MODIFICATIONS TO THE PROJECT THAT INCREASE THE RISK TO ENVIRONMENTAL RESOURCES SHALL BE EVALUATED IN ACCORDANCE WITH THE PERMIT REQUIREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.4.1 MARK SITE BOUNDARIES

SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED.

PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES. BECAUSE THIS PROJECT FALLS UNDER THE CGP 3-9020, BARRIER FENCE SHALL BE USED INSTEAD OF PROJECT DEMARCATION FENCE WITHIN 100 FEET OF A WATER RESOURCE (STREAM, BROOK, LAKE, POND, WETLAND, ETC).

1.4.2 LIMIT DISTURBANCE AREA

PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES (PHASING) AS CONSTRUCTION PROCEEDS. ADDITIONAL MEASURES MAY BE NEEDED DUE TO THE PHASING OF THE PROJECT AND AS DIRECTED BY THE ENGINEER. ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

1.4.3 STABILIZE CONSTRUCTION ENTRANCES AND EXITS

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTORS' PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

NO SPECIFIC LOCATION WAS DETERMINED FOR INSTALLATION OF THE CONSTRUCTION ENTRANCE(S). THE RESIDENT ENGINEER WILL DETERMINE THE LOCATION(S) AND QUANTITIES OF CONSTRUCTION ENTRANCE(S) IF DEEMED NECESSARY.

1.4.4 INSTALL SEDIMENT BARRIERS

SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

SILT FENCE SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

PIPE INLET PROTECTION SHALL BE INSTALLED AS PROPOSED ON THE PLAN.

FILTER FABRIC DROP INLET PROTECTION SHALL BE INSTALLED ON INLETS IN THE ROADWAY DURING CONSTRUCTION.

1.4.5 DIVERT UPLAND RUNOFF

DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCTION SITE.

SWALES (STORM WATER FROM STREET COLLECTION DRAINAGE SYSTEM)

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSION POTENTIAL OF CONCENTRATED FLOW IN CHANNELS.

PREFABRICATED CHECK DAMS WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN, OR AS DIRECTED BY THE RESIDENT ENGINEER.

1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS.

TYPE II STONE FOR SLOPE LINING AND CHANNEL PROTECTION
SEED AND MULCH
DRAINAGE INLETS AND PIPING
PERMANENT EROSION MATTING

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTRUBANCE OR IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT 3-9020 AUTHORIZATION.

TRACKING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, WILL BE UTILIZED ON A REGULAR BASIS. SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF FORECASTED RAIN. SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING INTERMITTENT PHASES OF CONSTRUCTION.

1.4.9 WINTER STABILIZATION
VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

1.4.10 STABILIZE SOIL AT FINAL GRADE

EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

1.4.11 DE-WATERING ACTIVITIES

DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

NO DE-WATERING ACTIVITIES ARE ANTICIPATED ON THIS PROJECT.

1.4.12 INSPECT THE SITE

INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

1.5 SEQUENCE AND STAGING

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

1.5.1 CONSTRUCTION SEQUENCE

REFER TO THE TRAFFIC MANAGEMENT PLANS FOR CONSTRUCTION PHASING AND POTENTIAL ORDER OF WORK.

1.5.2 OFF-SITE ACTIVITIES

IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTIONS 105.25 - 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

PROJECT NAME: HYDE PARK	
PROJECT NUMBER: HES 030-2(23)	
FILE NAME: +08bl26frm.dgn	PLOT DATE: 08-DEC-2010
PROJECT LEADER: JLS	DRAWN BY: MBL
DESIGNED BY: MBL	CHECKED BY: JAD
EPSC NARRATIVE	SHEET 50 OF 100